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                    GenCore version 4.5
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OM protein - protein search, using sw model

Run on:          May  7, 2002, 12:00:48 ; Search time 53.91 Seconds
                                          (without alignments)
                                          175.874 Million cell updates/sec

Title:           US-09-772-103-8
Perfect score:   655
Sequence:        1 MDFQVQIFSFLLISASVILS..........CQQWSSYPLTFGGGTKVEIK 128

Scoring table:   BLOSUM62
                 Gapop 10.0 , Gapext 0.5

Searched:        522463 seqs, 74073290 residues

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
                 Maximum Match 100%
                 Listing first 45 summaries

Database :       A_Geneseq_1101:*
       1: /SIDS8/gcgdata/geneseq/geneseqp/AA1980.DAT:*
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       4: /SIDS8/gcgdata/geneseq/geneseqp/AA1983.DAT:*
       5: /SIDS8/gcgdata/geneseq/geneseqp/AA1984.DAT:*
       6: /SIDS8/gcgdata/geneseq/geneseqp/AA1985.DAT:*
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      13: /SIDS8/gcgdata/geneseq/geneseqp/AA1992.DAT:*
      14: /SIDS8/gcgdata/geneseq/geneseqp/AA1993.DAT:*
      15: /SIDS8/gcgdata/geneseq/geneseqp/AA1994.DAT:*
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      19: /SIDS8/gcgdata/geneseq/geneseqp/AA1998.DAT:*
      20: /SIDS8/gcgdata/geneseq/geneseqp/AA1999.DAT:*
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Total number of hits satisfying chosen parameters: 522463

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	655	100.0	128	22	AAG66522	Humanised anti-CTL
2	609	93.0	128	17	AAR90684	Humanised 5C7.29 a
3	600	91.6	128	21	AAY77597	Anti-human VEGF re
4	600	91.6	128	22	AAB78866	Anti-human Flt-1 a
5	599	91.5	235	18	AAW41398	Humanised antibody
6	593	90.5	235	18	AAW41411	Humanised light ch
7	590	90.1	133	15	AAR53345	REI human Ab L cha
8	590	90.1	133	20	AAY28394	Anti-GM2 light cha
9	590	90.1	133	20	AAY28371	Intermediate seque
10	587	89.6	126	21	AAY77599	Anti-human VEGF re
11	587	89.6	126	22	AAB78868	Anti-human Flt-1 a

12	584	89.2	130	19	AAW73179	Fragment of gangli
13	584	89.2	130	19	AAW73180	Fragment of gangli
14	584	89.2	130	20	AAY28376	Human chimeric ant
15	584	89.0	130	20	AAY28375	Human chimeric ant
16	583	89.0	235	18	AAW41410	Humanised light ch
17	580	88.5	130	19	AAW73181	Fragment of gangli
18	580	88.5	130	20	AAY28377	Human chimeric ant
19	573	87.5	126	21	AAY77601	Anti-human VEGF re
20	573	87.5	126	22	AAB78870	Anti-human Flt-1 a
21	572	87.3	130	19	AAW73182	Fragment of gangli
22	572	87.3	130	20	AAY28378	Human chimeric ant
23	571	87.2	130	19	AAW73185	Fragment of gangli
24	571	87.2	130	20	AAY28381	Human chimeric ant
25	568	86.7	130	19	AAW73184	Fragment of gangli
26	568	86.7	130	20	AAY28380	Human chimeric ant
27	567	86.6	130	19	AAW73173	Light chain of gan
28	567	86.6	130	20	AAY28382	Light chain of gan
29	566	86.4	130	19	AAB07970	A light chain vari
30	564	86.1	130	21	AAW73176	Human chimeric ant
31	562	85.8	130	19	AAW73183	Fragment of gangli
32	562	85.8	130	20	AAY28379	Human chimeric ant
33	560	85.5	130	19	AAW73174	Light chain of gan
34	560	85.5	130	20	AAY28383	Human chimeric ant
35	543	82.9	235	17	AAW06180	Human chimeric ant
36	528	80.6	128	22	AAG66521	Humanised A5B57 li
37	523	79.8	235	18	AAW41392	Mouse antibody 26
38	520	79.4	126	21	AAY77598	Chimeric anti-CEA
39	520	79.4	126	22	AAB78867	Anti-human VEGF re
40	520	79.4	128	13	AAR27050	Anti-human Flt-1 a
41	519	79.2	128	22	AAB69655	VL425 antibody clo
42	518	79.1	126	19	AAW36164	Murine mik-betal a
43	517	78.9	128	12	AAR12327	Humanised light ch
44	516	78.8	129	17	AAR88108	Light (kappa) chai
45	514	78.5	128	17	AAR90690	Murine anti-Protei
						Mouse 5C7.29 monoc

ALIGNMENTS

```
RESULT   1
AAG66522
ID   AAG66522 standard; Protein; 128 AA.
XX
AC   AAG66522;
XX
DT   22-OCT-2001  (first entry)
XX
DE   Humanised anti-CTLA4 light chain.
XX
KW   Human; CTLA4; cytotoxic T lymphocyte associated antigen 4; anti-CTLA4;
KW   immunosuppressive; immunomodulator; antiallergic; vaccine; antibody;
KW   T cell; humanised antibody; autoimmune disorder; graft rejection;
KW   allergy; light chain.
XX
OS   Homo sapiens.
OS   Mus musculus.
OS   Synthetic.
XX
PN   WO20154732-A1.
XX
PD   02-AUG-2001.
XX
PF   26-JAN-2001; 2001WO-US02653.
XX
PR   27-JAN-2000; 2000US-0178473.
XX
PA   (GEMY ) GENETICS INST INC.
XX
PI   Carreno BM, Wood C, Turner K, Collins M, Gray GS, Morris D;
PI   O'Hara D, Hinton P, Tsurushita N;
XX
DR   WPI; 2001-483195/52.
DR   N-PSDB; AAH76440, AAH76442.
```

XX
PT   Novel antibody-toxic group conjugate comprising an antibody that
PT   recognizes a molecule expressed only on activated T cells, useful for
PT   modulating immune response for treating autoimmune disorder, allergic
PT   response -
XX
PS   Claim 14; Fig 9; 123pp; English.
XX
CC   The invention relates to an antibody-toxic group conjugate comprising
CC   an antibody that specifically recognises a molecule expressed only on
CC   activated T cells, and a toxic group. The T cell molecule is
CC   preferably human cytotoxic T lymphocyte associated antigen 4 (CTLA4).
CC   The antibody of the invention is a humanised anti-CTLA4 antibody
CC   comprising a sequence of 128 or 142 amino acids fully defined in the
CC   specification. The antibody-toxic group conjugate is useful for
CC   modulating the immune response in a subject suffering from a disorder
CC   or condition such as autoimmune disorder, immune response to a graft,
CC   allergic response or an immune response to a therapeutic protein.
CC   The antibody is also useful for research purposes, e.g., in staining
CC   and isolating CTLA4-bearing cells. The antibody is also useful for
CC   T-cell typing, for isolating specific IL-2 receptor-bearing cells or
CC   fragments of the receptor, for vaccine preparation, and for determining
CC   the effectiveness of an agent to down-regulate CTLA4 activity. The
CC   present sequence is the light chain of humanised anti-CTLA4
CC   antibody.
XX
SQ   Sequence   128 AA;

Query Match   100.0%; Score 655; DB 22; Length 128;
Best Local Similarity   100.0%; Pred. No. 1.1e-41; Indels   0; Gaps   0;
Matches 128; Conservative   0; Mismatches   0;

Qy   1 MDFQVQIFSFLLISASVILSRGDIQMTQSPSSLSASVGDRVTITCSATSSITYMSWYQQK 60
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1 mdfqvqifsfllisasvilsrgdiqmtqspsslsasvgdrvtitcsatssitymswyqqk 60

Qy   61 PGKAPKLLIYDTSNLASGVPSRFSGSGSGTDYTLTISSLQPEDFATYYCQQWSSYPLTFG 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   61 pgkapklliydtsnlasgvpsrfsgsgsgtdytltisslqpedfatyycqqwssypltfg 120

Qy   121 GGTKVEIK 128
          ||||||||
Db   121 ggtkveik 128

FT   /note="complementarity determining region"

PT   Monoclonal and humanised antibodies having specificity for P- and
PT   E-selectin - useful for treatment of inflammatory diseases, e.g.
PT   ischaemia-reperfusion injury, psoriasis, etc.
XX
PS   Claim 13; Fig 8A; 89pp; English.
XX
CC   This humanized 5C7.29 antibody light chain variable region, together
CC   with the corresponding heavy chain variable region (see AAR90685),
CC   results in a humanized antibody that specifically binds to P- and E-
CC   selectin and inhibits the binding of selectins to a counterreceptor
CC   of the selectins. The humanized light chain variable region
CC   contains complementarity determining regions (CDRs) having amino
CC   acid sequences from non-human antibody light chain and consists of a
CC   variable region framework sequence substantially identical to a
CC   human light chain variable region framework sequence. The humanized
CC   antibody may be used in the diagnosis and therapy of inflammation
CC   and conditions such as ischaemia-reperfusion injury, adult
CC   respiratory distress syndrome, trauma, stroke, sepsis, psoriasis
CC   and autoimmune disease. It may also be used in affinity
CC   purification of selectin and cells, generation of anti-idiotypic
CC   antibodies, and in the screening of therapeutic agents having the
CC   same binding specificity as a cross-reacting antibody.
XX
SQ   Sequence   128 AA;

Query Match   93.0%; Score 609; DB 17; Length 128;
Best Local Similarity   93.0%; Pred. No. 2.9e-38; Indels   0; Gaps   0;
Matches 119; Conservative   3; Mismatches   6;

Qy   1 MDFQVQIFSFLLISASVILSRGDIQMTQSPSSLSASVGDRVTITCSATSSITYMSWYQQK 60
          |||||||||||||||||||||||||:|||||||||||||||||||||:||::|| |||||
Db   1 mdfqvqifsfllisasvilsrgdiqmtqspsslsasvgdrvtitcsasssvpymhwyqqk 60

Qy   61 PGKAPKLLIYDTSNLASGVPSRFSGSGSGTDYTLTISSLQPEDFATYYCQQWSSYPLTFG 120
          |||||||||||||||||||||||||||||||||||||||||||||||:| | ||||||||
Db   61 pgkapklliydtsnlasgvpsrfsgsgsgtdytltisslqpedfatyycqwssdpftfg 120

Qy   121 GGTKVEIK 128
          ||||||||
Db   121 ggtkveik 128

```
XX
OS   Mus musculus.
XX
PN   WO9960025-A1.
XX
PD   25-NOV-1999.
XX
PF   20-MAY-1999;    99WO-JP02661.
XX
PR   20-MAY-1998;    98JP-0139000.
XX
PA   (KYOW ) KYOWA HAKKO KOGYO KK.
XX
PI   Shitara K,  Ito M,  Kawada Y,  Nakamura K;
XX
DR   WPI: 2000-072431/06.
DR   N-PSDB: AA287745.
XX
PT   Gene recombinant antibodies, useful for diagnosis and as remedies for
CC   diseases due to abnormal neovascularization e.g. proliferation or
CC   metastasis of solid tumor, rheumatoid arthritis, diabetic retinopathy
CC   and psoriasis -
XX
PS   Claim 27; Page 200-201; 210pp; Japanese.
XX
CC   The invention relates to a gene recombinant antibody that has specific
CC   reaction with human vascular endothelial growth factor (VEGF) receptor
CC   Flt-1. The antibodies are useful for diagnosis and as remedies for
CC   diseases due to abnormal neovascularisation such as proliferation or
CC   metastasis of solid tumor, arthritis in rheumatoid arthritis, diabetic
CC   retinopathy, premature retinopathy and psoriasis.
XX
SQ   Sequence   128 AA;

Query Match             91.6%;    Score 600;  DB 21;   Length 128;
Best Local Similarity   91.4%;    Pred. No. 1.3e-37;
Matches  117;  Conservative    5;  Mismatches    6;  Indels     0;  Gaps     0;

Qy    1 MDFQVQIFSFLLISASVILSRGDIQMTQSPSSLSASVGDRVTITCSATSSITYMSWYQQK 60
         ||||||||||||||||||||||||||||||||||||||||||||::|| ||||
Db    1 mdfqvqifsfllisasviisrgdiqmtqspsslsasvgdrvtitcsasssvsynhwyqqk 60

Qy   61 PGKAPKLLIYDTSNLASGVPSRFSGSGSGTDYTLTISSLQPEDFATYYCQQWSSYPLTFG 120
         |||||||| |||||||||||| ||||||||||||||||||||||||| ||
Db   61 pgkapklliydtsklpsgvpsrfsgsgsgtdftltisslqpedfatyycqqwssnpptfg 120

Qy  121 GGTKVEIK 128
         ||||||
Db  121 ggtkveik 128

RESULT  4
AAB78866
ID   AAB78866 standard; Protein; 128 AA.
XX
AC   AAB78866;
XX
DT   20-APR-2001  (first entry)
XX
DE   Anti-human Flt-1 antibody VL CDR  protein sequence SEQ ID 88.
XX
KW   Differentiation; monocyte; macrophage; haematopoietic stem cell; cancer;
KW   vascular endothelial growth factor; VEGF; Flt-1; inflammation; antibody;
KW   delayed hypersensitivity; malignant tumour; arteriosclerosis.
XX
OS   Synthetic.
XX
PN   WO200079275-A1.
XX
PD   28-DEC-2000.
XX
PF   16-JUN-2000; 2000WO-JP03957.
```

```
XX
PR   17-JUN-1999;    99JP-0171709.
XX
PA   (KYOW ) KYOWA HAKKO KOGYO KK.
XX
PI   Shitara K,  Shibuya M;
XX
DR   WPI: 2001-080847/09.
DR   N-PSDB; AAF70222.
XX
PT   Substances binding to human vascular endothelial growth factor receptor
PT   Flt-1, used for diagnosis and treatment of inflammatory diseases,
PT   arteriosclerosis, cancer and delayed hypersensitivity -
XX
PS   Example 3; Page 156; 164pp; Japanese.
XX
CC   This invention relates to a reagent for detecting differentiation of
CC   monocytes and macrophages from haematopoietic stem cells, containing a
CC   substance which binds to human vascular endothelial growth factor (VEGF)
CC   receptor Flt-1. The invention also includes a method for diagnosing a
CC   disease in which the differentiation of monocytes and macrophages is
CC   implicated, using the reagent, and an agent for the treatment of diseases
CC   diagnosed using the method, containing a substance which binds to Flt-1
CC   or a substance which inhibits the signal transduction of Flt-1. Diseases
CC   which may be diagnosed or treated include inflammation, delayed
CC   hypersensitivity, malignant tumours and arteriosclerosis.
CC   AAF70190 - AAF70244, AAF70251 and AAF70258 represent DNA sequences
CC   encoding anti-human Flt-1 monoclonal antibody fragments, and
CC   oligonucleotides used in the construction of the antibody. The monoclonal
CC   antibody is used in the reagent of the invention. PCR primers AAF70245 -
CC   AAF78870 (excluding AAF70251) are used in the isolation of the antibody
CC   DNA sequences. Protein sequences AAB78848 - AAB78870 represent fragments
CC   of the anti-human Flt-1 antibody.
XX
SQ   Sequence   128 AA;

Query Match             91.6%;    Score 600;  DB 22;   Length 128;
Best Local Similarity   91.4%;    Pred. No. 1.3e-37;
Matches  117;  Conservative    5;  Mismatches    6;  Indels     0;  Gaps     0;

Qy    1 MDFQVQIFSFLLISASVILSRGDIQMTQSPSSLSASVGDRVTITCSATSSITYMSWYQQK 60
         ||||||||||||||||||||||||||||||||||||||||||||::|| ||||
Db    1 mdfqvqifsfllisasviisrgdiqmtqspsslsasvgdrvtitcsasssvsynhwyqqk 60

Qy   61 PGKAPKLLIYDTSNLASGVPSRFSGSGSGTDYTLTISSLQPEDFATYYCQQWSSYPLTFG 120
         |||||||| |||||||||||| ||||||||||||||||||||||||| ||
Db   61 pgkapklliydtsklpsgvpsrfsgsgsgtdftltisslqpedfatyycqqwssnpptfg 120

Qy  121 GGTKVEIK 128
         ||||||
Db  121 ggtkveik 128

RESULT  5
AAW41398
ID   AAW41398 standard; Protein; 235 AA.
XX
AC   AAW41398;
XX
DT   02-JUN-1998  (first entry)
XX
DE   Humanised antibody 806.077 variable light chain.
XX
KW   Anti-CEA antibody; carcinoembryonic antigen; 806.077 Ab; cancer therapy;
KW   cancer diagnosis; complementarity determining region; Fd chain.
XX
OS   Chimeric - Homo sapiens.
OS   Chimeric - Mus sp.
XX
PN   WO9742329-A1.
XX
PD   13-NOV-1997.
```

XX
PF   29-APR-1997;   97WO-GB01165.
XX
PR   14-FEB-1997;   97GB-0003103.
PR   04-MAY-1996;   96GB-0009405.
XX
PA   (ZENE) ZENECA LTD.
XX
PI   Copley CG, Edge MD, Emery SC;
XX
DR   WPI; 1997-558987/51.
DR   N-PSDB; AAV17297].
XX
PT   Anti-carcinoembryonic antigen antibody 806.077 Ab - used for
PT   diagnosis and therapy of cancer
XX
PS   Example 11; Page 124-125; 208pp; English.
XX
CC   This sequence is the light chain variable region of the antibody of
CC   the invention. The antibody is an anti-CEA (carcinoembryonic antigen)
CC   antibody (806.077 Ab). Host cells or transgenic organisms transformed
CC   with DNA encoding the antibody, are used to make the antibody or
CC   conjugate. The conjugate is used in a medicament suitable for intravenous
CC   administration. The conjugate can be used for cancer therapy, selectively
CC   killing tumour cells. The antibody can be used for in vivo or in vitro
CC   diagnosis of cancer.
XX
SQ   Sequence   235 AA;

Query Match   91.5%;   Score 599;   DB 18;   Length 235;
Best Local Similarity   91.4%;   Pred. No. 2.8e-37;
Matches 117;   Conservative   5;   Mismatches   6;   Indels   0;   Gaps   0;

Qy   1 MDFQVQIFSFLLISASVILSRGDIQMTQSPSSLSASVGDRVTITCSATSSITYMSWYQQK 60
             ||||||||||||||||::||||||||||||||||||||||||||:||:||| ||||
Db   1 mdfqvqifsfllisasvimsrgdiqmtqspsslsasvgdrvtitcsasssvtymhwyqqk 60

Qy   61 PGKAPKLLIYDTSNLASGVPSRFSGSGSGTDYTLTISSLQPEDFATYYCQQWSSYPLTFG 120
             ||||||||| || ||||||||||||||||||| |||||||| |||||||:|:||||
Db   61 pgkapkliystsnlasgvpsrfsgsgsgtdytftisslqpediatyycqqrstypltfg 120

Qy 121 GGTKVEIK 128
             ||:|||
Db 121 ggtklelk 128

RESULT 6
1411
AAW41411 standard; Protein; 235 AA.
XX
AC   AAW41411;
XX
DT   02-JUN-1998 (first entry)
XX
DE   Humanised light chain HuVK4-HuCK.
XX
KW   Anti-CEA antibody; carcinoembryonic antigen; 806.077 Ab; cancer therapy;
KW   cancer diagnosis; complementarity determining region; Fd chain.
XX
OS   Chimeric - Homo sapiens.
OS   Chimeric - Mus sp.
XX
PN   WO9742329-A1.
XX
PD   13-NOV-1997.
XX
PF   29-APR-1997;   97WO-GB01165.
XX
PR   14-FEB-1997;   97GB-0003103.
PR   04-MAY-1996;   96GB-0009405.
XX
PA   (ZENE) ZENECA LTD.

XX
PI   Copley CG, Edge MD, Emery SC;
XX
DR   WPI; 1997-558987/51.
DR   N-PSDB; AAV17315.
XX
PT   Anti-carcinoembryonic antigen antibody 806.077 Ab - used for
PT   diagnosis and therapy of cancer
XX
PS   Example 45; Page 164-165; 208pp; English.
XX
CC   This sequence is the HuVK4-HuCK light chain of the antibody of
CC   the invention. The antibody is an anti-CEA (carcinoembryonic antigen)
CC   antibody (806.077 Ab). Host cells or transgenic organisms transformed
CC   with DNA encoding the antibody, are used to make the antibody or
CC   conjugate. The conjugate is used in a medicament suitable for intravenous
CC   administration. The conjugate can be used for cancer therapy, selectively
CC   killing tumour cells. The antibody can be used for in vivo or in vitro
CC   diagnosis of cancer.
XX
SQ   Sequence   235 AA;

Query Match   90.5%;   Score 593;   DB 18;   Length 235;
Best Local Similarity   90.6%;   Pred. No. 7.7e-37;
Matches 116;   Conservative   5;   Mismatches   7;   Indels   0;   Gaps   0;

Qy   1 MDFQVQIFSFLLISASVILSRGDIQMTQSPSSLSASVGDRVTITCSATSSITYMSWYQQK 60
             ||||||||||||||||:||||||||||||||||||||||||||||:||:||| ||||
Db   1 mdfqvqifsfllisasvimsrgdiqmtqspsslsasvgdrvtitcsasssvtymhwyqqk 60

Qy   61 PGKAPKLLIYDTSNLASGVPSRFSGSGSGTDYTLTISSLQPEDFATYYCQQWSSYPLTFG 120
             ||||||||| || |||||||||||||||||||| |||||||| |||||||:|:||||
Db   61 pgkapklwiystsnlasgvpsrfsgsgsgtdytftisslqpediatyycqqrstypltfg 120

Qy 121 GGTKVEIK 128
             ||:|||
Db 121 ggtklelk 128

RESULT 7
AAR53345
ID   AAR53345 standard; Protein; 133 AA.
XX
AC   AAR53345;
XX
DT   18-NOV-1994 (first entry)
XX
DE   REI human Ab L chain variable region.
XX
KW   Monoclonal antibody; Ab; ganglioside GM2; chimera;
KW   chimeric antibody; expression vector; heavy; light; chain:
KW   hypervariable region; CDR; constant region; hybridoma;
KW   Ig; immunoglobulin; promoter; enhancer.
XX
OS   Synthetic.
XX
FH   Key   Location/Qualifiers
FT   Peptide   1..22
FT   /label= sig_peptide
XX
PN   AU9346181-A.
XX
PD   17-MAR-1994.
XX
PF   07-SEP-1993;   93AU-0046181.
XX
PR   07-SEP-1992;   92JP-0238452.
XX
PA   (KYOW) KYOWA HAKKO KOGYO KK.
XX
PI   Hanai N, Hasegawa M, Koike M, Kuwana Y, Nakamura K;
PI   Shitara K;

```
XX
DR   WPI; 1994-126857/16.
DR   N-PSDB; AAQ77823.
XX
PT   Humanised antibody specific for ganglioside GM2 - used for
PT   producing a cytocidal effect on cancers such as melanoma,
PT   neuroblastoma and glioma.
XX
PS   Example 2; Page 122-123; 191pp; English.
XX
CC   REI was used as human Ab L chain variable region-encoding
CC   DNA to which CDRs were to be transplanted. DNAs given in
CC   AAQ63448-53 were synthesised and ligated in order to obtain
CC   a DNA, hKM796L (AAQ77823).
XX
SQ   Sequence   133 AA;

Query Match      90.1%;      Score 590;  DB 15;   Length 133;
Best Local Similarity   89.8%;    Pred. No. 7.5e-37;
Matches 115;  Conservative   6;  Mismatches   7;  Indels  0;  Gaps  0;

Qy    1 MDFQVQIFSFLLISASVILSRGDIQMTQSPSSLSASVGDRVTITCSATSSITYMSWYQQK 60
          | |||||||||||||||||| ::||||||||||||||||||||||:||::|| |||||
Db    1 mhfqvqifsfllisasvimsrgdiqltqspsslsasvgdrvtitcsasssvsymhwyqqk 60

Qy   61 PGKAPKLLIYDTSNLASGVPSRFSGSGSGTDYTLTISSLQPEDFATYYCQQWSSYPLTFG 120
        |||||||| ||||||||||||||||||||||::| |||||||| |||||||| |||| |||
Db   61 pgkapklliystsnlasgvpsrfsgsgsgtdfttissiqpediatyycqgrssypytfg 120

Qy  121 GGTKVEIK 128
        ||||||||
Db  121 ggtkveik 128


RESULT   8
AAY28394
ID   AAY28394 standard; Protein; 133 AA.
XX
AC   AAY28394;
XX
DT   04-NOV-1999  (first entry)
XX
DE   Anti-GM2 light chain hKM796L ligation product.
XX
KW   antibody; nucleotide; genomic; hypervariable region;
KW   chimeric; light chain; heavy chain; plasmid; ligation product.
XX
OS   Synthetic.
OS   Homo sapiens.
XX
PN   US5939532-A.
XX
PD   17-AUG-1999.
XX
PF   07-JUN-1995;      95US-0483528.
XX
PR   07-JUN-1995;      95US-0483528.
PR   07-SEP-1993;      93US-0116778.
XX
PA   (KYOW ) KYOWA HAKKO KOGYO KK.
XX
PI   Hanai N, Hasegawa M, Koike M, Kuwana Y, Nakamura K;
PI   Shitara K;
XX
DR   WPI; 1999-468416/39.
XX
PT   Chimeric human antibody expression vectors
XX
PS   Example 2; Column 159-161; 188pp; English.
XX
CC   This is the ligation product formed when peptide fragments AAY28390 to
CC   AAY28392 replace the complementarity determining regions of REI.
```

```
CC   Chimeric human antibodies of the invention are useful in the treatment
CC   of cancer, especially that which is of neural ectodermal origin.
CC   In contrast to prior art constructs based on mouse monoclonal
CC   antibodies, the chimeric human antibodies do not cause anti-mouse
CC   immunoglobulin production.
CC   The chimeric human antibodies have a prolonged half-life and a reduced
CC   frequency of adverse effects when compared to mouse monoclonal
CC   antibodies.
XX
SQ   Sequence   133 AA;

Query Match      90.1%;      Score 590;  DB 20;   Length 133;
Best Local Similarity   89.8%;    Pred. No. 7.5e-37;
Matches 115;  Conservative   6;  Mismatches   7;  Indels  0;  Gaps  0;

Qy    1 MDFQVQIFSFLLISASVILSRGDIQMTQSPSSLSASVGDRVTITCSATSSITYMSWYQQK 60
          | |||||||||||||||||| ::||||||||||||||||||||||:||::|| |||||
Db    1 mhfqvqifsfllisasvimsrgdiqltqspsslsasvgdrvtitcsasssvsymhwyqqk 60

Qy   61 PGKAPKLLIYDTSNLASGVPSRFSGSGSGTDYTLTISSLQPEDFATYYCQQWSSYPLTFG 120
        |||||||| ||||||||||||||||||||||::| |||||||| ||||||| ||| |||
Db   61 pgkapklliystsnlasgvpsrfsgsgsgtdfttissiqpediatyycqgrssypytfg 120

Qy  121 GGTKVEIK 128
        ||||||||
Db  121 ggtkveik 128


RESULT   9
AAY28371
ID   AAY28371 standard; Protein; 133 AA.
XX
AC   AAY28371;
XX
DT   04-NOV-1999  (first entry)
XX
DE   Intermediate sequence in the construction of human antibodies.
XX
KW   immunoglobulins; antibody; chimeric; vector; expression;
KW   light chain; heavy chain; amino acid.
XX
OS   Mammalia sp.
XX
PN   US5939532-A.
XX
PD   17-AUG-1999.
XX
PF   07-JUN-1995;      95US-0483528.
XX
PR   07-JUN-1995;      95US-0483528.
PR   07-SEP-1993;      93US-0116778.
XX
PA   (KYOW ) KYOWA HAKKO KOGYO KK.
XX
PI   Hanai N, Hasegawa M, Koike M, Kuwana Y, Nakamura K;
PI   Shitara K;
XX
DR   WPI; 1999-468416/39.
DR   N-PSDB; AAX99497.
XX
PT   Chimeric human antibody expression vectors
XX
PS   Disclosure; Column 109; 188pp; English.
XX
CC   This sequence is forms a stage in the production of anti-GM2 human
CC   chimeric antibodies.
CC   The chimeric human antibodies are useful in the treatment of
CC   cancer, especially that which is of neural ectodermal origin.
CC   In contrast to prior art constructs based on mouse monoclonal antibodies,
CC   the chimeric human antibodies do not cause anti-mouse immunoglobulin
CC   production.
CC   The chimeric human antibodies have a prolonged half-life and a
```

CC   reduced frequency of adverse effects when compared to mouse monoclonal
CC   antibodies.
XX
SQ   Sequence   133 AA;

Query Match   90.1%; Score 590; DB 20; Length 133;
Best Local Similarity 89.8%; Pred. No. 7.5e-37;
Matches 115; Conservative   6; Mismatches   7; Indels   0; Gaps   0;

Qy   1 MDFQVQIFSFLLISASVILSRGDIOMTQSPSSLSASVGDRVTITCSATSSITYMSWYQQK 60
           | |||||||||||||||||||||||||||||||||||||||||||||||:|| ||||||
Db   1 mhfqvqifsfllisasvimsrgdiqltqspsslsasvgdrvtitcsasssvsymhwyqqk 60

Qy   61 PGKAPKLLIYDTSNLASGVPSRFSGSGSGTDYTLTISSLQPEDFATYYCQQWSSYPLTFG 120
           ||||||||||| ||||||||||||||||||||::| |||||||||| ||||||| |||
Db   61 pgkapklliystnlasgvpsrfsgsgsgtdftlisslqpediatyycqqrssypytfg 120

Qy   121 GGTKVEIK 128
           ||||||||
Db   121 ggtkveik 128

⬤
RESULT 10
AAY77599
ID   AAY77599 standard; peptide; 126 AA.
XX
AC   AAY77599;
XX
DT   08-MAY-2000 (first entry)
XX
DE   Anti-human VEGF receptor Flt-1 antibody related peptide sequence #94.
XX
KW   Antibody; human; vascular endothelial growth factor; VEGF receptor;
KW   Flt-1; neovascularisation; cell proliferation; metastasis; tumour;
KW   rheumatoid arthritis; retinopathy; psoriasis.
XX
OS   Mus musculus.
XX
PN   WO9960025-A1.
XX
PD   25-NOV-1999.
XX
PF   20-MAY-1999; 99WO-JP02661.
XX
PR   20-MAY-1998; 98JP-0139000.
XX
PA   (KYOW) KYOWA HAKKO KOGYO KK.
XX
PA   Shitara K, Ito M, Kawada Y, Nakamura K;
XX
DR   WPI; 2000-072431/06.
DR   N-PSDB; AAZ87771.
XX
PT   Gene recombinant antibodies, useful for diagnosis and as remedies for
PT   diseases due to abnormal neovascularization e.g. proliferation or
PT   metastasis of solid tumor, rheumatoid arthritis, diabetic retinopathy
PT   and psoriasis.
XX
PS   Claim 28; Page 202; 210pp; Japanese.
XX
CC   The invention relates to a gene recombinant antibody that has specific
CC   reaction with human vascular endothelial growth factor (VEGF) receptor
CC   Flt-1. The antibodies are useful for diagnosis and as remedies for
CC   diseases due to abnormal neovascularisation such as proliferation or
CC   metastasis of solid tumor, arthritis in rheumatoid arthritis, diabetic
CC   retinopathy, premature retinopathy and psoriasis.
XX
SQ   Sequence   126 AA;

Query Match   89.6%; Score 587; DB 21; Length 126;
Best Local Similarity 90.6%; Pred. No. 1.2e-36;

Matches 116; Conservative   5; Mismatches   5; Indels   2; Gaps   1;

Qy   1 MDFQVQIFSFLLISASVILSRGDIOMTQSPSSLSASVGDRVTITCSATSSITYMSWYQQK 60
           | |||||||||||||||||||||||||||||||||||||||||||||||:|| ||||||
Db   1 mdfqvqifsfllisasvilsrgdiqmtqspsslsasvgdrvtitcsasssvsymhwyqqk 60

Qy   61 PGKAPKLLIYDTSNLASGVPSRFSGSGSGTDYTLTISSLQPEDFATYYCQQWSSYPLTFG 120
           ||||||||||| ||||||||||||||||||||||||||||||||||||| | | ||||
Db   61 pgkapklliyrtsnlasgvpsrfsgsgsgtdftlisslqpedfatyychqwsny--tfg 118

Qy   121 GGTKVEIK 128
           ||||||
Db   119 ggtkveik 126

RESULT 11
AAB78868
ID   AAB78868 standard; Protein; 126 AA.
XX
AC   AAB78868;
XX
DT   20-APR-2001 (first entry)
XX
DE   Anti-human Flt-1 antibody VL CDR protein sequence SEQ ID 90.
XX
KW   Differentiation; monocyte; macrophage; haematopoietic stem cell; cancer;
KW   vascular endothelial growth factor; VEGF; Flt-1; inflammation; antibody;
KW   delayed hypersensitivity; malignant tumour; arteriosclerosis.
XX
OS   Synthetic.
XX
PN   WO200079275-A1.
XX
PD   28-DEC-2000.
XX
PF   16-JUN-2000; 2000WO-JP03957.
XX
PR   17-JUN-1999;   99JP-0171709.
XX
PA   (KYOW) KYOWA HAKKO KOGYO KK.
XX
PA   Shitara K,   Shibuya M;
XX
PI   WPI; 2001-080847/09.
XX
DR   N-PSDB; AAF70244.
XX
PT   Substances binding to human vascular endothelial growth factor receptor
PT   Flt-1, used for diagnosis and treatment of inflammatory diseases,
PT   arteriosclerosis, cancer and delayed hypersensitivity -
XX
PS   Example 3; Page 157; 164pp; Japanese.
XX
CC   This invention relates to a reagent for detecting differentiation of
CC   monocytes and macrophages from haematopoietic stem cells, containing a
CC   substance which binds to human vascular endothelial growth factor (VEGF)
CC   receptor Flt-1. The invention also includes a method for diagnosing a
CC   disease in which the differentiation of monocytes and macrophages is
CC   implicated, using the reagent, and an agent for the treatment of diseases
CC   diagnosed using the method, containing a substance which binds to Flt-1
CC   or a substance which inhibits the signal transduction of Flt-1. Diseases
CC   which may be diagnosed or treated include inflammation, delayed
CC   hypersensitivity, malignant tumours and arteriosclerosis.
CC   AAF70190 - AAF70244, AAF70251 and AAF70258 represent DNA sequences
CC   encoding anti-human Flt-1 monoclonal antibody fragments, and
CC   oligonucleotides used in the construction of the antibody. The monoclonal
CC   antibody is used in the reagent of the invention. PCR primers AAF70245 -
CC   AAF70870 (excluding AAF70251) are used in the isolation of the antibody
CC   DNA sequences. Protein sequences AAB78848 - AAB78870 represent fragments
CC   of the anti-human Flt-1 antibody.
XX
SQ   Sequence   126 AA;

Query Match
Best Local Similarity 89.6%; Score 587; DB 22; Length 126;
Matches 116; Conservative 5; Mismatches 5; Indels 2; Gaps 1;

```
Qy    1 MDFQVQIFSFLLISASVILSRGDIQMTQSPSSLSASVGDRVTITCSATSSITYMSWYQQK 60
        |||||||| |||||||||||||||||||||||||||||||||||:||::|| ::|| ||||
Db    1 mdfqvqifsfllisasvilsrgdiqmtqspsslsasvgdrvtitcsasssvsymhwyqqk 60

Qy   61 PGKAPKLLIYDTSNLASGVPSRFSGSGSGTDYTLTISSLQPEDFATYYCQQWSSYPLTFG 120
        |||||||| | ||||||||||||||||||||||| |||||||||||||| | |||    |||
Db   61 pgkapklllyrtsnlasgvpsrfsgsgsgtdftltisslqpedfatyychqwsmy--tfg 118

Qy  121 GGTKVEIK 128
        |||||||
Db  119 ggtkveik 126
```

RESULT 12
AAW73179
ID   AAW73179 standard; Protein; 130 AA.
XX
AC   AAW73179;
XX
DT   22-JAN-1999 (first entry)
XX
DE   Fragment of ganglioside GM2 targeting antibody.
XX
KW   Ganglioside GM2; antibody; complementarity determining region; cancer;
KW   anti-tumour agent.
XX
OS   Homo sapiens.
XX
PN   JP10257893-A.
XX
PD   29-SEP-1998.
XX
PF   19-MAR-1997; 97JP-0066981.
XX
PR   19-MAR-1997; 97JP-0066981.
XX
PA   (KYOW) KYOWA HAKKO KOGYO KK.
XX
DR   WPI; 1998-575904/49.
DR   N-PSDB; AAV08065.
XX
PT   A human type complementarity determining region transplanted
PT   antibody against ganglioside GM2 - useful as an anti-tumour agent
PT   and as a diagnostic for related cancers
XX
PS   Example 3; Page 38; 66pp; Japanese.
XX
CC   This sequence is a fragment of an antibody of the invention.
CC   The antibody of the invention is a human complementarity determining
CC   region transplanted antibody that reacts specifically with ganglioside
CC   GM2. DNA encoding the antibody, and vectors and transformants containing
CC   it, can be used for the recombinant production of the antibody. The
CC   antibody itself can be used as an anti-tumour agent or as a diagnostic
CC   tool for related cancers. The antibody has antitumour activity against
CC   ganglioside GM2 positive cells.
XX
SQ   Sequence 130 AA;

Query Match
Best Local Similarity 89.2%; Score 584; DB 19; Length 130;
Matches 114; Conservative 6; Mismatches 8; Indels 0; Gaps 0;

```
Qy    1 MDFQVQIFSFLLISASVILSRGDIQMTQSPSSLSASVGDRVTITCSATSSITYMSWYQQK 60
        |||||||| ||||||||| :||||||||||||||||||||||||||||||   :|| ||||
Db    1 mhfqvqifsflllisasvimsrgdiqltqspsslsaspdrvtitcsasssvsymhwyqqk 60

Qy   61 PGKAPKLLIYDTSNLASGVPSRFSGSGSGTDYTLTISSLQPEDFATYYCQQWSSYPLTFG 120
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Db   61 pgkapklliystsnlasgvpsrfsgsgsgtdftfitisslqpediatyycqgrssypytfg 120

```
Qy  121 GGTKVEIK 128
        |||||||
Db  121 ggtkveik 128
```

RESULT 13
AAW73180
ID   AAW73180 standard; Protein; 130 AA.
XX
AC   AAW73180;
XX
DT   22-JAN-1999 (first entry)
XX
DE   Fragment of ganglioside GM2 targeting antibody.
XX
KW   Ganglioside GM2; antibody; complementarity determining region; cancer;
KW   anti-tumour agent.
XX
OS   Homo sapiens.
XX
PN   JP10257893-A.
XX
PD   29-SEP-1998.
XX
PF   19-MAR-1997; 97JP-0066981.
XX
PR   19-MAR-1997; 97JP-0066981.
XX
PA   (KYOW) KYOWA HAKKO KOGYO KK.
XX
DR   WPI; 1998-575904/49.
DR   N-PSDB; AAV08086.
XX
PT   A human type complementarity determining region transplanted
PT   antibody against ganglioside GM2 - useful as an anti-tumour agent
PT   and as a diagnostic for related cancers
XX
PS   Example 3; Page 39; 66pp; Japanese.
XX
CC   This sequence is a fragment of an antibody of the invention.
CC   The antibody of the invention is a human complementarity determining
CC   region transplanted antibody that reacts specifically with ganglioside
CC   GM2. DNA encoding the antibody, and vectors and transformants containing
CC   it, can be used for the recombinant production of the antibody. The
CC   antibody itself can be used as an anti-tumour agent or as a diagnostic
CC   tool for related cancers. The antibody has antitumour activity against
CC   ganglioside GM2 positive cells.
XX
SQ   Sequence 130 AA;

Query Match
Best Local Similarity 89.2%; Score 584; DB 19; Length 130;
Matches 114; Conservative 6; Mismatches 8; Indels 0; Gaps 0;

```
Qy    1 MDFQVQIFSFLLISASVILSRGDIQMTQSPSSLSASVGDRVTITCSATSSITYMSWYQQK 60
        |||||||| |||||||||:||||||:|||||||||||||||||||||||||   :|| ||||
Db    1 mhfqvqifsflllisasvinsrgdiqltqspsslsasvgdrvtitcsasssvsymhwyqgk 60

Qy   61 PGKAPKLLIYDTSNLASGVPSRFSGSGSGTDYTLTISSLQPEDFATYYCQQWSSYPLTFG 120
        |||||| |  ||||||||||||||||||||||| |||||||||    |||  | |||  |||
Db   61 pgkapklwiystsnlasgvpsrfsgsgsgtdftfitisslqpediatyycqgrssypytfg 120

Qy  121 GGTKVEIK 128
        |||||||
Db  121 ggtkveik 128
```

RESULT 14
AAY28375
ID   AAY28375 standard; Protein; 130 AA.

```
XX
AC   AAY28375;
XX
DT   04-NOV-1999  (first entry)
XX
DE   Human chimeric anti-GM2 heavy chain version 1.
XX
KW   antibody; nucleotide; genomic; hypervariable region;
KW   chimeric; light chain; heavy chain; CDR; plasmid;
KW   complementarity determining region.
XX
OS   Chimeric - Homo sapiens.
OS   Chimeric - Mus sp.
XX
FH   Key              Location/Qualifiers
FT   Peptide          1..22
FT                    /label= "signal peptide"
FT   Protein          23..130
FT                    /label= "Mature heavy chain"
FT   Domain           46..55
FT                    /label= "CDR1"
FT   Domain           71..77
FT                    /label= "CDR2"
FT   Domain           100..108
FT                    /label= "CDR3"
FT                    /note= "Complementarity determining region"
XX
PN   US5939532-A.
XX
PD   17-AUG-1999.
XX
PF   07-JUN-1995;    95US-0483528.
XX
PR   07-JUN-1995;    95US-0483528.
PR   07-SEP-1993;    93US-0116778.
XX
PA   (KYOW ) KYOWA HAKKO KOGYO KK.
XX
PI   Hanai N, Hasegawa M, Koike M, Kuwana Y, Nakamura K;
PI   Shitara K;
XX
DR   WPI; 1999-468416/39.
DR   N-PSDB; AAZ06275.
XX
PT   Chimeric human antibody expression vectors
XX
PS   Example 3; Column 125-127; 188pp; English.
XX
CC   This is the amino acid sequence derived from AAZ06275, which can be
CC   amplified from the plasmid pBSL16 by the mutant primers AAZ06273 and
CC   AAZ06274.
CC   Chimeric human antibodies of the invention are useful in the treatment
CC   of cancer, especially that which is of neural ectodermal origin.
CC   In contrast to prior art constructs based on mouse monoclonal
CC   antibodies, the chimeric human antibodies do not cause anti-mouse
CC   immunoglobulin production.
CC   The chimeric human antibodies have a prolonged half-life and a reduced
CC   frequency of adverse effects when compared to mouse monoclonal
CC   antibodies.
XX
SQ   Sequence   130 AA;

Query Match         89.2%;  Score 584;  DB 20;  Length 130;
Best Local Similarity   89.1%;  Pred. No. 2e-36;
Matches 114;  Conservative 6;  Mismatches 6;  Indels 8;  Gaps 0;

Qy    1 MDFQVQIFSFLLISASVILSRGDIQMTQSPSSLSASVGDRVTITCSATSSITYMSWYQQK 60
          | |||||||||||||||||| :|||||||||||||||:||||||||||||:::|| ::||
Db    1 mhfqvqifsfllisasvimsrgdiqltqspsslsaspgdrvtitcsasssvsynhwyqqk 60

Qy   61 AGKAPKLLIYDTSNLASGVPSRFSGSGSGTDYTLTISSLQPEDFATYYCQQWSSYPLTFG 120
          :||||||||| ||||||||||||||||||||||| :| ||||||:|||| |||| | |||
Db   61 pgkapklliystnlasgvpsrfsgsgsgtdftftisslqpediatyycqqrssypytfg 120

Qy  121 GGTKVEIK 128
          ||||||||
Db  121 ggtkveik 128


RESULT 15
AAY28376
ID   AAY28376 standard; Protein; 130 AA.
XX
AC   AAY28376;
XX
DT   04-NOV-1999  (first entry)
XX
DE   Human chimeric anti-GM2 light chain version 2.
XX
KW   antibody; nucleotide; genomic; hypervariable region;
KW   chimeric; light chain; heavy chain; CDR; plasmid;
KW   complementarity determining region.
XX
OS   Chimeric - Homo sapiens.
OS   Chimeric - Mus sp.
XX
FH   Key              Location/Qualifiers
FT   Peptide          1..22
FT                    /label= "signal peptide"
FT   Protein          23..130
FT                    /label= "Mature heavy chain"
FT   Domain           46..55
FT                    /label= "CDR1"
FT   Domain           71..77
FT                    /label= "CDR2"
FT   Domain           100..108
FT                    /label= "CDR3"
FT                    /note= "Complementarity determining region"
XX
PN   US5939532-A.
XX
PD   17-AUG-1999.
XX
PF   07-JUN-1995;    95US-0483528.
XX
PR   07-JUN-1995;    95US-0483528.
PR   07-SEP-1993;    93US-0116778.
XX
PA   (KYOW ) KYOWA HAKKO KOGYO KK.
XX
PI   Hanai N, Hasegawa M, Koike M, Kuwana Y, Nakamura K;
PI   Shitara K;
XX
DR   WPI; 1999-468416/39.
DR   N-PSDB; AAZ06278.
XX
PT   Chimeric human antibody expression vectors
XX
PS   Example 3; Column 129; 188pp; English.
XX
CC   This is the amino acid sequence derived from AAZ06278, which can be
CC   amplified from the plasmid pBSL16 by the mutant primers AAZ06276 and
CC   AAZ06277.
CC   Chimeric human antibodies of the invention are useful in the treatment
CC   of cancer, especially that which is of neural ectodermal origin.
CC   In contrast to prior art constructs based on mouse monoclonal
CC   antibodies, the chimeric human antibodies do not cause anti-mouse
CC   immunoglobulin production.
CC   The chimeric human antibodies have a prolonged half-life and a reduced
CC   frequency of adverse effects when compared to mouse monoclonal
CC   antibodies.
XX
SQ   Sequence   130 AA;
```

Query Match   89.2%; Score 584; DB 20; Length 130;
Best Local Similarity 89.1%; Pred. No. 2e-36;
Matches 114; Conservative   6; Mismatches   8; Indels   0; Gaps   0;

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Qy    1 MDFQVQIFSFLLISASVILSRGDIQMTQSPSSLSASVGDRVTITCSATSSITYMSWYQQK 60
        | |||||||||||||||:||||||||||||||||||||::||  |||||
Db    1 mhfqvqifsfllisasvimsrgdiqltqspsslsasvgdrvtitcsasssvsymhwyqqk 60

Qy   61 PGKAPKLLIYDTSNLASGVPSRFSGSGSGTDYTLTISSLQPEDFATYYCQQWSSYPLTFG 120
        ||||||| || |||||||||||||||||||:| ||||||||| ||||||| |||  |||
Db   61 pgkapklwiystsnlasgvpsrfsgsgsgtdfftlisslqpediatyycqgrssypytfg 120

Qy  121 GGTKVEIK 128
        ||||||||
Db  121 ggtkveik 128
```

Search completed: May 7, 2002, 12:00:48
    time: 126 sec